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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/065,991	12/07/2002	James Feine	USI-42	5250
23508	7590	06/15/2005		
LUNDEEN & DICKINSON, LLP PO BOX 131144 HOUSTON, TX 77219-1144			EXAMINER BUMGARNER, MELBA N	
			ART UNIT 3732	PAPER NUMBER
DATE MAILED: 06/15/2005				

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/065,991	Applicant(s) FEINE, JAMES	
	Examiner Melba Bumgarner	Art Unit 3732	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 March 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-27 is/are pending in the application.
- 4a) Of the above claim(s) 10-12, 14, 15 and 17-26 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-9, 13, 16 and 27 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>3/30/05</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

2. Claims 1-9, 13, 16, and 27 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The specification does not describe how the power sensitivity of the tip is determined in order to be matched with the efficiency of the magnetostrictive element and how the efficiency of the magnetostrictive element determined in relation to the “power range” of the tip.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claim 1-4, 6, 7, and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Balamuth (3,636,947). Balamuth discloses an ultrasonic dental insert comprising an magnetostrictive element 71 adapted to be received in the well, a velocity transducer 70 having proximal and distal ends, the proximal end is attached, a tip 16 having a proximal end secured to

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the distal end of the velocity transducer (figures 6,7). Balamuth does not explicitly show the efficiency of the magnetostrictive element is matched with the power sensitivity of the tip; however, it would have been an obvious matter of choice to have the magnetostrictive element and tip of the insert operate so as to not overpower the tip such as impart vibrations that are destructive. Balamuth does not show the element having an efficiency rating less than 50 percent. It would have been an obvious matter of choice as to the specific efficiency rating in that the specification defines highly efficient as 50 percent. The specific percentage is not disclosed as critical to the claimed invention. Furthermore, magnetostrictive transducers are known for inefficiency due to its dual energy conversion and magnetic hysteresis effects. As to claim 3, the element comprises nickel (column 8 line 7). As to claim 4, the element comprises a plurality of coextensive longitudinally oriented nickel wires 71 (figure 7). As to claim 6, the wires have a uniform cross section. As to claim 7, it would have been an obvious matter of choice to one of ordinary skill in the art as to the specific cross sectional size of the wires as it is not disclosed as critical to the claimed invention. As to claim 13, the element includes void space (as in the space between the wires).

5. Claim 27 is rejected under 35 U.S.C. 103(a) as being unpatentable over Balamuth in view of Andersson et al. Balamuth discloses an insert as described above and a method delivering power to the insert; however, Balamuth does not show the method comprising adjusting the power output. Andersson et al. teaches a method for adjusting the power an ultrasonic dental insert having a power control switch up to the maximum power output (column 1 line 63). It would have been obvious to one having ordinary skill in the art at the time the invention was

made to modify the method Balamuth to adjust the power output as in Andersson et al. in order to have the operator exercise control over the operation in view of Andersson et al.

Response to Arguments

6. Applicant's arguments filed March 30, 2005 have been fully considered but they are not persuasive. It is believed that the prior art shows the structural limitations of the claims. There is no structure claimed in the terms, by themselves, a power sensitive tip and efficiency modulated magnetostrictive element to distinguish them from the prior art. Applicant's arguments and cited teachings happen to pertain to breakage of tips and prevention of breakage of the tips. Although it is noted that this language is functional, applicant's claims are different in what is claimed, "to prevent overpowering the tip".

Information Disclosure Statement

7. The information disclosure statement filed March 30, 2005 is being considered by the examiner with the exception of Other Documents that are crossed out because those document are not properly identified as prior art. It has been placed in the application file, but the information referred to therein has not been considered as to the merits. See MPEP § 609.

Conclusion

8. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period

will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

9. Any inquiry concerning this communication or earlier communication from the examiner should be directed to Melba Bumgarner whose telephone number is 703-305-0740. The examiner can normally be reached on Mon-Fri.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kevin Shaver can be reached on (703) 308-2582. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Melba Bumgarner
Primary Examiner